



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------------------|------------------------|
| 09/396,429 | 09/15/1999 | JOHN S. HENDRICKS | 60136.0095USD2 | 7434 |
| 94140 | 7590 | 04/26/2012 | | |
| Merchant & Gould - Cox PO Box 2903 Minneapolis, MN 55402 | | | EXAMINER SALTARELLI, DOMINIC D | |
| | | | ART UNIT 2421 | PAPER NUMBER |
| | | | MAIL DATE 04/26/2012 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/396,429 | HENDRICKS ET AL. | |
| | Examiner | Art Unit | |
| | DOMINIC D. SALTARELLI | 2421 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2012.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 66-79 and 81-85 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 66-79 and 81-85 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 20, 2012 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 66-79 and 81-85 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 66, 70, 73, 77, 81-83, and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowen et al. (5,367,571, of record) [Bowen] in view of Ahlin et al. (5,321,840, of record) [Ahlin] and Reed et al. (5,251,909).

Regarding claims 66, 73, 83, and 85, Bowen discloses a set top terminal for use with a television program delivery system with menu selection of programs, the set top terminal having a microprocessor and microprocessor instructions for prompting generation of menus (such as an electronic program guide, col. 4, lines 56-65) and comprising:

- a receiver adapted to receive programs (fig. 2A, at RF input 100); and

- a first hardware upgrade (fig. 2B, expansion card 138) comprising:

- an upgrade interface configured for insertion within an expansion card interface slot of a set top terminal (figs. 11A-12A, col. 15 line 63 – col. 16 line 61) for communicating with the set top terminal and providing data to the set top terminal (col. 11, lines 43-65); and

- a hardware upgrade microprocessor, coupled to the upgrade interface, the hardware upgrade microprocessor configured for communicating with the set top terminal through the upgrade interface (when inserted, the secure microprocessor 201 may supplement or even replace the secure microprocessor of the set top device, col. 12, lines 4-24);

- wherein the hardware upgrade microprocessor provides enhanced functions to the set top terminal through communication with the set top terminal using the upgrade interface according to interactive input received from a subscriber (col. 12, lines 4-24).

Bowen fails to disclose the hardware upgrade microprocessor is directly coupled to the set top terminal microprocessor via a microprocessor bus and

Art Unit: 2421

further configured to communicate with a headend to receive upgrade data to provide the enhanced functions in response to the interactive input from the subscriber.

In an analogous art, Ahlin discloses a system for downloading application data to a receiver device in response to interactive input from a user, providing the benefit of improved security of receiver functions through system updates and access to a wide variety of diverse interactive services (col. 2 line 39 - col. 3 line 11 and col. 4 line 59 - col. 5 line 34).

It would have been obvious at the time to a person of ordinary skill in the art to modify the set top terminal of Bowen to include the hardware upgrade microprocessor is configured to communicate with a headend to receive upgrade data to provide the enhanced functions in response to the interactive input from the subscriber, as taught by Ahlin, providing the benefit of improved security of receiver functions through system updates and access to a wide variety of diverse interactive services.

Bowen and Ahlin fail to disclose the hardware upgrade microprocessor is directly coupled to the set top terminal microprocessor via a microprocessor bus.

In an analogous art, Reed discloses using a single microprocessor in a receiver device to control both handling user inputs and authorizing content (see Abstract, receiver processor is microprocessor 44 in fig. 1).

Bowen teaches using a control microprocessor and a secure microprocessor in a set top device that communicate with each other to authorize

Art Unit: 2421

programming and control the operation of the set top device (Bowen, col. 8, lines 25-27). As evidenced by Reed, it is known in the prior art to more simply use a single processor to perform both functions, thus it would have been obvious at the time to a person of ordinary skill in the art to modify the set top terminal of Bowen and Ahlin to include a single microprocessor in said set top device to control both handling user inputs and authorizing content. Consequently, the microprocessor of the set top device and the upgrade device would be connected via a single bus (Bowen, fig. 2B, control bus 141) rather than using two buses to connect to the processor of the upgrade card to a secure processor (Bowen, fig. 2B, secure bus 143) and a separate bus to connect the memory of the upgrade card to a control processor (Bowen, fig. 2B, control bus 141).

Regarding claims 70 and 77, Bowen, Ahlin, and Reed disclose the set top terminal and hardware upgrade of claims 66 and 73, wherein the upgrade interface is a card insertable interface enabling insertion into a card receiving slot of the set top terminal (Bowen, col. 16, lines 1-61).

Regarding claim 81 and 82, Bowen, Ahlin, and Reed disclose the set top terminal of claim 73, further comprising one or more additional hardware upgrades connected to the terminal (system supports multiple modules, col. 12, lines 8-14), wherein the at least one additional hardware upgrade consists of a

Art Unit: 2421

storage hardware upgrade (the hardware upgrade also provides additional memory for programs and data, Bowen, col. 8, lines 28-35).

5. Claims 67-69, 71, 72, 74-76, 78, 79, and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowen, Ahlin, and Reed as applied to claims 66, 73, and 83 above, and further in view of Hoarty et al. (5,526,034, of record) [Hoarty].

Regarding claims 67, 68, 74, 75, and 84 Bowen discloses the hardware upgrade, set top terminal, and system of claims 66, 73, and 83, further comprising memory, coupled to the hardware upgrade microprocessor, for storing data therein (col. 11 line 43 - col. 12 line 14 and col. 12, lines 60-66) and processing circuitry, coupled to the hardware upgrade microprocessor, wherein the hardware upgrade microprocessor accesses the memory and controls the processing circuitry to cause the processing circuitry to provide enhanced functions to the set top terminal via the upgrade interface (col. 12, lines 4-24 and col. 13 line 68 - col. 14 line 6). While Bowen also teaches that a modem is optionally included in the system to provide for communication between the receiver device and one or more headends (col. 5, lines 19-36), Bowen fails to disclose it is the processing circuitry that includes said modem.

In an analogous art, Hoarty teaches that it was known in the art at the time for set top devices with expansion ports to support insertion of a modem device into said expansion port to add additional functionality to the set top device (col. 16 line 60 - col. 17 line 5).

It would have been obvious at the time to a person of ordinary skill in the art to modify the hardware upgrade, set top device, and system of Bowen, Ahlin, and Reed to place the data modulation and demodulation function (modem) onto the hardware upgrade card, as taught by Hoarty. This represents an obvious rearrangement of components that does not affect the operation of Bowen's disclosed invention in any way.

Regarding claims 69 and 76, Bowen, Ahlin, Reed, and Hoarty disclose the hardware upgrade and set top device of claims 67 and 74, wherein the modem of the hardware upgrade retrieves information from an interactive service by accessing an on-line database enabling the set top terminal to engage in transactions using two-way communications over the modem of the hardware upgrade with the interactive service (Bowen, col. 5, lines 19-36), but fail to disclose this takes place via submenus provided by the hardware upgrade microprocessor as an overlay to a program displayed by the microprocessor of the set top terminal (Bowen only generally discloses the use of overlay graphics, col. 6 line 61 - col. 7 line 4).

Examiner takes official notice that accessing interactive content via submenus provided as an overlay to a program displayed is notoriously well known in the art.

It would have been obvious at the time to a person of ordinary skill in the art to modify the hardware upgrade and set top device of Bowen, Ahlin, Reed,

Art Unit: 2421

and Hoarty to include accessing the interactive content via submenus provided as an overlay to a program displayed. There is disclosure of each element claimed found in Bowen (menu access to content, interactive content, and capacity for creating overlays), Bowen is only silent on implementing the elements in the particular arrangement claimed.

Regarding claims 71, 72, 78, and 79, Bowen, Ahlin, Reed, and Hoarty disclose the hardware upgrade and set top device of claims 67 and 74, wherein the modem of the hardware upgrade is capable of communicating with any type of interactive service outside of the television program delivery system, (Bowen, col. 5, lines 19-36) where any type is inclusive of home shopping, airline reservations, news, financial information, classified advertisements, home banking, and interactive teletext.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOMINIC D. SALTARELLI whose telephone number is (571)272-7302. The examiner can normally be reached on Monday - Friday 9:00am - 6:00pm.

Art Unit: 2421

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dominic D Saltarelli/
Primary Examiner, Art Unit 2421